

Missouri Department of Transportation
Kevin Keith, Director

573.751.2551
Fax: 573.751.6555
1.888.ASK MODOT (275.6636)

November 9, 2011

Dear Research Partner:

The Missouri Highways and Transportation Commission requests proposals from qualified organizations—namely private consultants, universities, and research organizations—to furnish professional services as described in the following request for proposal to be coordinated by the Research Unit of the Construction and Materials Division.

Please submit a proposal for project TRyy1204 entitled, Foundation Design Using Multiple Data Sources. Your submittal must include a work plan, the proposed project team and its background, and any related projects now active or recently completed by your firm. The project team must be led by a licensed professional engineer in the state of Missouri and the final report must be sealed, in accordance with the provisions of Chapter 327 RSMo.

The selection committee will use Qualification Based Selection. A “not to exceed” budget amount is included in the RFP to assist with the required scope, but budgets are not to be included with the proposal submissions, and will not be presented to the selection committee.

Please deliver all proposals to the Construction and Materials Contract Administrator indicated in the attachment by December 7, 2011. More information about project contracting in general can be found at: www.modot.mo.gov/services/OR/orRFP.htm.

Sincerely,



Bill Stone, P. E.
Research Administrator



Our mission is to provide a world-class transportation experience that delights our customers and promotes a prosperous Missouri.

www.modot.org

This document contains information and requirements for only this RFP. A “Standard Requirements” document contains additional needs for all research proposals and contracting. Submitters should review both this document and the Standard Requirements document, available from the Construction and Materials Contract Administrator (identified at the end of this document) or:

www.modot.org/services/OR/orTemplates.htm

TRyy1204

Foundation Design Using Multiple Data Sources

Background:

In April, 2011, MoDOT updated the Engineering Policy Guide (EPG) for design of bridge foundations based on a two year research program. Foundation design is currently based on Load and Resistance Factor Design (LRFD) which is mandated by the new AASHTO bridge design specifications. Design parameters are based on the variability of a site. For most locations, the more information you have about a site, the more economically you can design a foundation. These recent revisions address design of drilled shafts and spread footings based on different types of geotechnical tests (e.g. Uniaxial Compression Tests, SPT, TCPT, Point Load Index.) While the revised guidelines provide for foundation design using different types of measurements individually, they do not address the potential for design using data from multiple tests simultaneously. This limits the economic benefit of the EPG provisions since typically multiple types of data are available for a given site.

Objectives:

The objective of this research project is to develop correlations between the following geotechnical tests: Uniaxial Compression Tests, SPT, TCPT, Point Load Index. Sections of the EPG that will be impacted are 751.37, 751.38 and 321.3. Deliverables should be in the form of updated Design Guidelines as well as a final report documenting the development of the new guidelines.

Project Requirements and Deliverables:

Task descriptions below are intended to provide guidance in development of the research but MoDOT is seeking the input of proposers to determine the best strategies to accomplish the research objectives.

Task 1: Literature review—a short summary of any previous research on the correlations of geotechnical tests.

Task 2: Collection of data—data should be collected from the Site Characterization task of the MTI/MoDOT Transportation Geotechnics Research Program.

Task 3: Analysis of Data—develop correlations between the geotechnical tests listed in the project objective.

Task 4: Design Guidelines—Develop design guidelines for possible insertion in the MoDOT EPG.

Task 5: Final Report—Provide a final report documenting the research project.

Quarterly Reports: Quarterly reports are due the last day of March, June, September, and December. This does not limit any informal meetings or communications that may be required during the project.

Interim Presentation: An Interim presentation shall be scheduled near the mid-point of the project to update MoDOT on the progress and the direction of the project. This is in addition to the necessary communication between the Principal Investigator(s) and MoDOT contacts throughout the project. The purpose of the interim presentation is to evaluate the progress and determine if any mid-project corrections are necessary.

Draft Final Report and Design Guidelines: A draft of the final report and design guidelines is due to the DOT 5 weeks prior to the final research findings.

Final Presentation: A final presentation is due at the time of the draft final report and design guidelines.

Final Report and Design Guidelines: The final report and design guidelines should be provided submitted 5 weeks after the draft. It is not due on the last day of the contract.

Project Schedule:

The following is an estimate of the project timeline or information on key dates within the project, presuming the project starts by January 15, 2012. Proposals need to include a work plan with a proposed timeline. While alternative timelines will be considered, an extension is unlikely. The project timeline will be finalized during the contracting phase.

By January 31, 2012: A kick-off meeting with MoDOT will be scheduled to discuss project requirements and deliverables.

March 30, 2012: 1st Quarterly Report Due

June 1 – June 30, 2012: Interim Presentation Due

June 30, 2012: 2nd Quarterly Report Due

September 30, 2012: 3rd Quarterly Report Due

December 31, 2012: 4th Quarterly Report Due

January 2, 2013: Draft Design Guidelines and draft Final Report

January 2- January 15, 2013: Final Presentation

February 6, 2013: Final Design Guidelines and Final Report Due.

March 30, 2012: Contract ends, final invoice is due to MoDOT.

(For report templates and a standard form see:
www.modot.org/services/OR/orTemplates.htm.)

Special Notes:

Project budget is not to exceed \$100,000. A budget is not to be included in the proposal, but will be required for the contract and must be within this limit.

Reporting templates and standard report forms are available from the Construction and Materials Contract Administrator or the web site:

www.modot.org/services/OR/orTemplates.htm

RFP Requirements:

- Proposals must be no more than 10 pages with a font size no less than 11 points. This length limit does not include forms or resumes attached to the proposal.
- The “Standard Requirements” document provides further details and links to the required forms. It is available from the Construction and Materials Contract Administrator or at: www.modot.org/services/OR/orTemplates.htm
- Proposals will be evaluated by an agency and stakeholder team with knowledge and backgrounds in relevant areas for this project. Selection of the successful proposer will be based on the proposer’s demonstrated knowledge in the required areas, the merit of the proposed methods and approach in achieving the desired goals, the experience and qualifications of the team, the plan for ensuring implementation of

results, and the adequacy and availability of team members to complete the work in a timely manner.

RFP Schedule:

The following timeline must be met for a proposal to be accepted.

Date:	Action:
Nov. 9, 2011	MoDOT posts RFP to the website: www.modot.mo.gov/services/OR/orRFP.htm
Nov. 23, 2011	Written comments or questions must be submitted to Construction and Materials Contract Administrator.
Nov. 30, 2011	MoDOT will post written responses publicly on the website: www.modot.mo.gov/services/OR/orRFP.htm
Dec. 7, 2011	Written proposals must be submitted to Construction and Materials Contract Administrator.
Dec. 21, 2011	MoDOT will notify submitters about project selection, or if needed about interviews to finalize selection.

Contracting Requirements:

- The successful team will be required to complete additional documentation and enter into a contract such as a “Standard Research Agreement” or “Task Order.” Applicants should be aware of these additional needs so contracting can proceed in a timely manner.
- Standard contracts, forms, attachment templates and additional information are available from the Construction and Materials Contract Administrator or the web site:
www.modot.org/services/OR/orTemplates.htm

Contact Information:

Proposals must be either hand delivered by close of business; or faxed, emailed, or mailed by midnight (Central Standard Time) according to time stamp or postmark; on the due date indicated below. Please reference the project title since more than one RFP may be due at one time. Electronic proposals are encouraged. They may be faxed or emailed to the OR Contract Administrator:

Karmen.Stockman@modot.mo.gov

Fax: 573-522-8416

Proposal packages suitable for duplicating may be submitted by mail or hand delivery to:

Construction and Materials Contract Administrator

Missouri Department of Transportation

1617 Missouri Blvd

PO Box 270

Jefferson City, MO 65109